



2570  
013

## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/028,952  
Source: DIPE  
Date Processed by STIC: 1-23-03

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER  
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to : U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

## Raw Sequence Listing Error Summary

### ERROR DETECTED      SUGGESTED CORRECTION

SERIAL NUMBER: 10/028,952

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1      Wrapped Nucleics      The number/text at the end of each line "wrapped" down to the next line. This may occur if your file  
     Wrapped Aminos      was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will  
                                  prevent "wrapping."
  
- 2      Invalid Line Length      The rules require that a line **not exceed** 72 characters in length. This includes white spaces.
  
- 3      Misaligned Amino      The numbering under each 5<sup>th</sup> amino acid is misaligned. Do **not** use tab codes between numbers;  
     Numbering      use **space characters**, instead.
  
- 4      Non-ASCII      The submitted file was **not** saved in ASCII(DOS) text, as **required** by the Sequence Rules. **Please**  
                                  **ensure your subsequent submission is saved in ASCII text.**
  
- 5      Variable Length      Sequence(s)          contain n's or Xaa's representing more than one residue. **Per Sequence Rules,**  
                                  **each n or Xaa can only represent a single residue.** Please present the **maximum** number of each  
                                  residue having variable length and indicate in the <220>-<223> section that some may be missing.
  
- 6      PatentIn 2.0      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid  
     "bug"      sequences(s)         . Normally, PatentIn would automatically generate this section from the  
                                  previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to  
                                  the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for**  
                                  **Artificial or Unknown sequences.**
  
- 7      Skipped Sequences      Sequence(s)          missing. If intentional, please insert the following lines for **each** skipped sequence:  
     (OLD RULES)      (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
                                  (i)      SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
                                  (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
                                  This sequence is intentionally skipped  
  
                                  Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to **include** the skipped sequences.
  
- 8      Skipped Sequences      Sequence(s)          missing. If **intentional**, please insert the following lines for **each** skipped sequence.  
     (NEW RULES)      <210> sequence id number  
                                  <400> sequence id number  
                                  000
  
- 9      ✓ Use of n's or Xaa's      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
     (NEW RULES)      Per 1.823 of Sequence Rules, use of <220>-<223> is **MANDATORY** if n's or Xaa's are present.  
                                  In <220> to <223> section, please explain location of **n** or **Xaa**, and which residue **n** or **Xaa** represents.
  
- 10      Invalid <213>      Per 1.823 of Sequence Rules, the only **valid** <213> responses are: Unknown, Artificial *anything*, or  
     Response      scientific name (Genus/species). <220>-<223> section is **required** when <213> response is Unknown or  
                                  contains Artificial.
  
- 11      Use of <220>      Sequence(s)          missing the <220> "Feature" and associated numeric identifiers and responses.  
                                  Use of <220> to <223> is **MANDATORY** if <213> "Organism" response contains the word "Artificial" or  
                                  "Unknown." Please explain source of genetic material in <220> to <223> section, i.e., why you chose Artificial or  
                                  Unknown. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
  
- 12      PatentIn      Please do not use "Copy to Disk" function of PatentIn. In PatentIn 2.x it causes a corrupted file  
     "bug"      and in PatentIn 3.x you may lose your hard returns in the sequence listing. Instead, please use "Windows Explorer"  
                                  or any other manual means to copy file to floppy disk.



*Does Not Comply  
Corrected Diskette Needed  
See Additional pages 1-13*

OIPE

## RAW SEQUENCE LISTING

DATE: 01/23/2003

PATENT APPLICATION: US/10/028,952

TIME: 13:55:27

Input Set : A:\4273-3u1.app

Output Set: N:\CRF4\01232003\J028952.raw

3 <110> APPLICANT: Ervin, Jr., Paul R.  
 5 <120> TITLE OF INVENTION: EPITHELIAL CELL GROWTH INHIBITORS  
 7 <130> FILE REFERENCE: 4273.3USW1  
 9 <140> CURRENT APPLICATION NUMBER: 10/028,952  
 C--> 10 <141> CURRENT FILING DATE: 2002-12-18  
 12 <150> PRIOR APPLICATION NUMBER: PCT/US00/16900  
 13 <151> PRIOR FILING DATE: 2000-06-19  
 15 <150> PRIOR APPLICATION NUMBER: 60/139,995  
 16 <151> PRIOR FILING DATE: 1999-06-18  
 18 <160> NUMBER OF SEQ ID NOS: 10  
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 30 ccccccggtg tccccgcgag gggcccgggg cggggtccgc cggccctgcg ggccgcccgt 180  
 31 gaaataccac tactcttata gttttttcac tgaccgcggtc gagcgggggg gcgagccccg 240  
 32 aggggctctc gcttctggcg ccaagcgccc ggccgcgcgc cggccggggc cgaccgcgtc 300  
 33 cggggacagt gccaggtggg gagtttgact ggggcggtac acctgtcaaa cggtaacgca 360  
 34 ggtgtcctaa ggcgagctca gggaggacag aaacctcccg tggagcagaa gggcaaaagc 420  
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 42 gaatcccgcc caggcggaac gatacggcag cgccgcggag cctcggttgg cctcggatta 900  
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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/028,952

DATE: 01/23/2003

TIME: 13:55:27

Input Set : A:\4273-3u1.app

Output Set: N:\CRF4\01232003\J028952.raw

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DATE: 01/23/2003

TIME: 13:55:27

Input Set : A:\4273-3u1.app

Output Set: N:\CRF4\01232003\J028952.raw

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128 gctccgggga cagtgccagg tggggagttt gactggggcg gtacacctgt caaacggtaa 300
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134 tgagctgggt ttagaccgtc gtgagacagg ttagttttac cctactgatg atgtgttggt 660
135 gccatggtaa tcctgctcag tacgagagga accgcagggt cagacatttg gtgtatgtgc 720
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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/028,952

DATE: 01/23/2003

TIME: 13:55:27

Input Set : A:\4273-3u1.app

Output Set: N:\CRF4\01232003\J028952.raw

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197 acgaaggctg gtggcggtgg tatgggccc atggccattt tggcatgttc cctgccaact 1560
198 acgtggagct cattgagtga ggctgagggc acatcttgcc cttcccctct cagacatggc 1620
199 ttccttattg ctggaagagg aggcctggga gttgacattc agcactcttc cagggaatagg 1680
200 acccccagtg aggatgaggc ctgagggtc cctccggctt ggcagactca gcctgtcacc 1740
201 ccaaattgcag caatggcctg gtgattccca cacatccttc ctgcatcccc cgacctccc 1800
202 agacagcttg gctcttgccc ctgacaggat actgagccaa gccctgcctg tggccaagcc 1860
203 ctgagtggcc actgccaagc tgcggggaag ggtcctgagc aggggcatct gggaggctct 1920
204 ggctgccttc tgcatttatt tgcctttttt cttttctct tgcctctaag ggggtggggc 1980
205 caccactgtt tagaatgacc cttgggaaca gtgaacgtag agaattgttt ttagcagagt 2040
206 ttgtgaccaa agtcagagtg gatcatggtg gtttggcagc agggaatttg tcttggttga 2100
207 gcctgctctg tgcctccccc tccatttctc tgcctctct cctgggctat gggaagtggg 2160
208 gatgcagatg gccaaagctc caccctgggt attcaaaaac ggcagacaca acatgttcct 2220
209 ccacgcggct cactcgatgc ctgcaggccc cagtgtgtgc ctcaactgat tctgacttca 2280
210 ggaaaagtaa aaaaaaaaaa aaaaaactcg agaagctttg gacttcttcg cca 2333

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/028,952

DATE: 01/23/2003

TIME: 13:55:27

Input Set : A:\4273-3u1.app

Output Set : N:\CRF4\01232003\J028952.raw

```

213 <210> SEQ ID NO: 5
214 <211> LENGTH: 21
215 <212> TYPE: DNA
216 <213> ORGANISM: Homo sapiens
218 <400> SEQUENCE: 5
219 gcgccggccg ggcgcgaccc g 21
222 <210> SEQ ID NO: 6
223 <211> LENGTH: 21
224 <212> TYPE: DNA
225 <213> ORGANISM: Homo sapiens
227 <400> SEQUENCE: 6
228 gcaatctcag cgcactgctg c 21
231 <210> SEQ ID NO: 7
232 <211> LENGTH: 2843
233 <212> TYPE: DNA
234 <213> ORGANISM: Homo sapiens
236 <400> SEQUENCE: 7
237 ctttgggagg ccgaggccgt aggatccctc gaggaatcgc ctaaccctgg ggaggttgag 60
238 gttgcagtga gtgagccata gttgtgtcac tgtgtccag tctgggcgaa agacagaatg 120
239 aggccctgcc acaggcaggc aggcaggcag gcaggcagaa agacaacagc tgtattatgt 180
240 tcttctcagg gtaggaagca aaaataacag aatacagcac ttaattaatt tttttttttt 240
241 ccttcggacg gagtttctact ctgtgtgccc acgctggagt gcagtggcac catctcggct 300
242 caccgcaacc tccacctccc gcgttcaagc gattctcctg cctcagcctc ctgagtagct 360
243 gggattacag ggaggagcca ccacacccag ctgattttgt attgttagta gagacggcat 420
244 ttctccatgt gggtcaggct ggtctcgaac tggcgacccc agtggatctg cccgccccgg 480
245 cctcccaaag tgctgggggtg acaggcgtga gccatcgtga ctggccggct acgtttatatt 540
246 atttattttt ttaattattt tacttttttt tagttttcca ttttaatacta tttatttatt 600
247 tacatttatt tattttattt tttatttact tattttattt ttttcgagac agactctcgc 660
248 tctgtctgcc aggtctggagt gcagcggcgt gatctcggct cactgcaacg tccgcctccc 720
249 gggttcacgc cattctcctg cctcagcctc ccaagtagct gggactacag gcgcccggca 780
250 ccgtgccccg ctaacttttt gtattttgag tagagatggg gtttctactgt ggtagccagg 840
251 atggtctcga tctcctgacc ccgtgatccg tccacctcgg cctcccaaag tgctgggatg 900
252 acaggcgtga gccaccggcc ccggcctatt tatctattta ttaactttga gtccaggtta 960
253 tgaaaccagt tagtttttgt aatttttttt tttttttttt ttttttgaga cgaggtttca 1020
254 ccgtgtttgcc aaggcttgga ccgagggatc caccggccct cggcctccca aaagtgcggg 1080
255 gatgacaggc gcgagcctac cgcgcccggg ccccccttt ccccttcccc cgcttgtctt 1140
256 cccgacagac agttttcacg cagagcgttt ggctggcgtg cttaaaactca ttctaaatag 1200
257 aaatttgga cgtcagcttc tggcctcacg gactctgagc cgaggagtcc cctggtctgt 1260
258 ctatcacagg accgtacacg taaggaggag aaaaatcgta acgttcaaag tcagtcattt 1320
259 tgtgatacag aaatacacg attcacccaa aacacagaaa ccagtctttt agaaatggcc 1380
260 ttagccctgg tgtccgtgcc agtgattctt ttcggtttgg accttgactg agaggattcc 1440
261 cagtcggtct ctcgtctctg gacggaagtt ccagatgatc cgatgggtgg gggacttagg 1500
262 ctgcgtcccc ccaggagccc tggctcgatta gttgtgggga tcgccttgga gggcgcgggtg 1560
263 acccactgtg ctgtgggagc ctccatcctt cccccaccc cctccccagg gggatcccaa 1620
264 ttcatctcgg gctgacacgc tcaactggcag gcgtcgggca tcacctagcg gtcactgtta 1680
265 ctctgaaaac ggaggcctca cagaggaagg gagcaccagg ccgcctgcgc acagcctggg 1740
266 gcaactgtgt ctctccacc gcccccggcc ccacctcaa gttcctccct cccttgttgc 1800
267 ctaggaaatc gccactttga cgaccgggtc tgattgacct ttgatcaggc aaaaacgaac 1860
268 aaacagataa ataaataaaa taacacaaaa gtaactaact aaataaaata agtcaatata 1920

```

**RAW SEQUENCE LISTING ERROR SUMMARY**  
**PATENT APPLICATION: US/10/028,952**

DATE: 01/23/2003  
TIME: 13:55:28

Input Set : A:\4273-3u1.app  
Output Set: N:\CRF4\01232003\J028952.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; Xaa Pos. 16,41,44,48,64,96,112,118,131,144,160,168,173,192,198,208  
Seq#:9; Xaa Pos. 227,240,256,264,276,288,302,304,336,352,383,399,431,447  
Seq#:9; Xaa Pos. 479,495,520,522,527,543,544,552,556,558,575,591,602,622  
Seq#:9; Xaa Pos. 623,639,671,687,719,735  
Seq#:10; Xaa Pos. 10,13,32,48,80,87,96,100,128,137,142,144,166,176,192,196  
Seq#:10; Xaa Pos. 224,233,240,245,270,272,288,320,336,352,353,363,367,368  
Seq#:10; Xaa Pos. 371,383,384,385,410,416,432,438,464,480,487,495,496,497  
Seq#:10; Xaa Pos. 506,512,513,522,528,550,554,560,574,576,589,591,608,624  
Seq#:10; Xaa Pos. 652,656,657,662,663,672,702,704,718,720,723,734,743,752



## VERIFICATION SUMMARY

DATE: 01/23/2003

PATENT APPLICATION: US/10/028,952

TIME: 13:55:28

Input Set : A:\4273-3u1.app

Output Set: N:\CRF4\01232003\J028952.raw

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:500 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:9  
L:500 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
L:506 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:32  
L:509 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:48  
L:515 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:80  
L:518 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:96  
L:521 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:112  
L:524 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:128  
L:527 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:144  
L:530 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:160  
L:533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:176  
L:536 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:192  
L:542 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:224  
L:545 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:240  
L:548 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:256  
L:551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:272  
L:554 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:288  
L:560 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:320  
L:563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:336  
L:569 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:368  
L:572 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:384  
L:578 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:416  
L:581 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:432  
L:587 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:464  
L:590 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:480  
L:596 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:512  
L:599 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:528  
L:602 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:544  
L:605 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:560  
L:608 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:576  
L:611 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:592  
L:614 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:608  
L:617 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:624  
L:623 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:656  
L:626 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:672  
L:632 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:704  
L:635 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:720  
L:899 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:10  
L:899 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0  
L:902 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:16  
L:905 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:32  
L:911 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:64  
L:914 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:80  
L:917 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:96  
L:920 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:112  
L:923 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:128  
L:929 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:160

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/028,952

DATE: 01/23/2003

TIME: 13:55:28

Input Set : A:\4273-3u1.app

Output Set: N:\CRF4\01232003\J028952.raw

L:932 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:176  
L:935 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:192  
L:938 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:208  
L:941 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:224  
L:944 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:240

<210> 9  
<211> 760  
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<213> Homo sapiens

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See item # 9 on Error Summary  
Sheet. Each "Xaa" requires feature  
containing numeric identifiers  
<220>, <221>, <222>, and <223>.

If all Xaa's in the sequence  
are equal to the same thing, one  
feature with a range of the whole  
sequence in numeric identifier <222>  
is all that is necessary.

Example:

<220>

<221> unsure

<222> (1)... (760)

<223> Xaa = any amino acid.

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<220>  
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His Glu Ile Pro Thr Val Pro Thr Tyr Tyr Pro Ala Lys Pro Gln Xaa  
1 5 10 15

Glu Arg Ala Trp Arg Asn Gln Arg Gly Lys Lys Thr Leu Leu Ser Thr  
20 25 30

Leu Val Trp His Gly Glu Glu Thr Xaa Glu Val Xaa Asn Lys Trp Xaa  
35 40 45

Ala Pro Gly Ala Pro Pro Val Ser Pro Arg Gly Ala Arg Gly Gly Xaa  
50 55 60

Arg Pro Cys Gly Pro Pro Val Lys Tyr His Tyr Ser Asp Arg Phe Thr  
65 70 75 80

Asp Pro Val Arg Arg Gly Gly Glu Pro Arg Gly Ala Leu Ala Ser Xaa  
85 90 95

Ala Lys Arg Pro Ala Ala Arg Arg Pro Gly Ala Thr Arg Ser Gly Xaa  
100 105 110

Ala Arg Trp Gly Val Xaa Leu Gly Arg Tyr Thr Cys Gln Thr Val Gln  
115 120 125

Val Ser Xaa Gly Glu Leu Arg Glu Asp Arg Asn Leu Pro Trp Ser Xaa  
130 135 140

Arg Ala Lys Ala Arg Leu Ile Leu Ile Phe Ser Thr Asn Thr Asp Xaa  
145 150 155 160

Ser Gly Ala Ser Arg Ser Phe Xaa Pro Phe Gly Phe Xaa Ala Gly Val  
165 170 175

Arg Lys Val Thr Thr Gly Ile Thr Gly Leu Trp Arg Pro Ser Val Xaa  
180 185 190

Ser Asp Val Ala Phe Xaa Ser Phe Asp Val Gly Ser Ser Tyr His Xaa  
195 200 205

Ala Glu Phe Thr Lys Arg Trp Ile Val His Pro Leu Ile Gly Asn Ser  
210 215 220

Trp Asp Xaa Thr Val Val Arg Gln Val Ser Phe Thr Leu Leu Met Xaa  
225 230 235 240

Cys Cys Cys His Gly Asn Pro Ala Gln Tyr Glu Arg Asn Arg Arg Xaa

245										250					255				
His	Leu	Val	Tyr	Val	Leu	Gly	Xaa	Gly	Ala	Asn	Gly	Ala	Lys	Leu	Ser				
			260						265					270					
Val	Gly	Leu	Xaa	Leu	Asn	Ala	Ser	Lys	Ser	Glu	Ser	Arg	Pro	Gly	Xaa				
		275					280					285							
Thr	Ile	Arg	Gln	Arg	Arg	Gly	Ala	Ser	Val	Gly	Leu	Gly	Xaa	Pro	Xaa				
	290					295					300								
Arg	Leu	Ser	Pro	Pro	Ala	Gly	Arg	Pro	Pro	Leu	His	Ala	Pro	Arg	Arg				
305					310					315				320					
Gly	Arg	Ala	Arg	Ala	Pro	Pro	Arg	Ala	Gly	Thr	Gly	Val	Arg	Cys	Xaa				
				325					330					335					
Val	Pro	Phe	Val	Leu	Gly	Asn	Gly	Ala	Arg	Pro	Glu	Arg	Arg	Pro	Xaa				
			340					345					350						
Arg	Pro	Ser	Arg	Thr	Ala	Arg	Ser	Trp	Gly	Thr	Trp	Arg	Thr	Ser	Ile				
		355					360					365							
Ser	Ser	Pro	Gln	Pro	Gly	Lys	Leu	Arg	Ser	Pro	Phe	Leu	Gln	Xaa	Gln				
	370					375					380								
Leu	Thr	Gln	Pro	Glu	Thr	His	Phe	Gly	Arg	Glu	Pro	Ala	Ala	Xaa	Ser				
385					390					395				400					
Arg	Pro	Arg	Ala	Asp	Leu	Pro	Ala	Glu	Glu	Pro	Ala	Pro	Ser	Pro	Pro				
				405					410					415					
Cys	Leu	Val	Gln	Ala	Glu	Glu	Glu	Ala	Val	Tyr	Glu	Glu	Pro	Xaa	Glu				
			420					425					430						
Gln	Glu	Thr	Phe	Tyr	Glu	Gln	Pro	Pro	Leu	Val	Gln	Gln	Gln	Xaa	Gly				
		435					440					445							
Ser	Glu	His	Ile	Asp	His	His	Ile	Gln	Gly	Gln	Gly	Leu	Ser	Gln	Gly				
	450					455					460								
Leu	Cys	Ala	Arg	Ala	Leu	Tyr	Asp	Tyr	Gln	Ala	Ala	Asp	Asp	Xaa	Glu				
465					470				475					480					
Ile	Ser	Phe	Asp	Pro	Glu	Asn	Leu	Ile	Thr	Gly	Ile	Glu	Val	Xaa	Glu				
				485				490					495						
Gly	Trp	Trp	Arg	Gly	Tyr	Gly	Pro	Asp	Gly	His	Phe	Gly	Met	Pro	Ala				
			500					505					510						
Asn	Tyr	Val	Glu	Leu	Ile	Glu	Xaa	Gly	Xaa	Gly	His	Ile	Leu	Xaa	Phe				
		515					520					525							
Pro	Ser	Gln	Thr	Trp	Leu	Pro	Tyr	Cys	Trp	Lys	Arg	Arg	Pro	Xaa	Xaa				
	530					535					540								
His	Ser	Ala	Leu	Phe	Gln	Glu	Xaa	Asp	Pro	Gln	Xaa	Gly	Xaa	Leu	Arg				

545                      550                      555                      560

Ala Pro Ser Gly Leu Ala Asp Ser Ala Cys His Pro Lys Cys Xaa Asn  
565                      570                      575

Gly Leu Val Ile Pro Thr His Pro Ser Cys Ile Pro Arg Pro Xaa Thr  
580                      585                      590

Ala Trp Leu Leu Pro Leu Thr Gly Tyr Xaa Ala Lys Pro Cys Trp Pro  
595                      600                      605

Ser Pro Glu Trp Pro Leu Pro Ser Cys Gly Glu Gly Ser Xaa Xaa Gly  
610                      615                      620

Ala Ser Gly Arg Leu Trp Leu Pro Ser Ala Phe Ile Cys Leu Xaa Phe  
625                      630                      635                      640

Ser Leu Ala Ser Lys Gly Trp Trp Pro Pro Leu Phe Arg Met Leu Gly  
645                      650                      655

Asn Ser Glu Arg Arg Glu Leu Phe Leu Ala Glu Phe Val Thr Xaa Val  
660                      665                      670

Arg Val Asp His Gly Gly Leu Ala Ala Gly Asn Leu Ser Cys Xaa Leu  
675                      680                      685

Leu Cys Ala Pro His Ser Ile Ser Leu Ser Leu Cys Leu Gly Gly Lys  
690                      695                      700

Trp Gly Cys Arg Trp Pro Ser Ser His Pro Gly Tyr Ser Lys Xaa Ala  
705                      710                      715                      720

Asp Thr Thr Cys Ser Ser Thr Arg Leu Thr Arg Cys Leu Gln Xaa Val  
725                      730                      735

Cys Ala Ser Thr Asp Ser Asp Phe Arg Lys Ser Lys Lys Lys Lys Lys  
740                      745                      750

Leu Glu Lys Leu Trp Thr Ser Ser  
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— Same as page 1 of  
Additional pages



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Thr Asp Pro Val Arg Arg Gly Gly Glu Pro Arg Gly Ala Leu Ala Gly  
50 55 60

Ala Lys Arg Pro Ala Ala Arg Arg Pro Gly Ala Thr Arg Ser Gly Xaa  
65 70 75 80

Ser Ala Arg Trp Gly Val Xaa Leu Gly Arg Tyr Thr Cys Gln Thr Xaa  
85 90 95

Gln Val Ser Xaa Gly Glu Leu Arg Glu Asp Arg Asn Leu Pro Trp Arg  
100 105 110

Arg Ala Lys Ala Arg Leu Ile Leu Ile Phe Ser Thr Asn Thr Asp Xaa  
115 120 125

Glu Ser Gly Ala Ser Arg Ser Phe Xaa Pro Phe Gly Phe Xaa Ala Xaa  
130 135 140

Val Arg Lys Val Thr Thr Gly Ile Thr Gly Leu Trp Arg Pro Ser His  
145 150 155 160

Ser Asp Val Ala Phe Xaa Ser Phe Asp Val Gly Ser Ser Tyr His Xaa  
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Glu Ala Glu Phe Thr Lys Arg Trp Ile Val His Pro Leu Ile Gly Xaa  
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Ser Trp Val Xaa Thr Val Val Arg Gln Val Ser Phe Thr Leu Leu Met  
195 200 205

Cys Cys Cys His Gly Asn Pro Ala Gln Tyr Glu Arg Asn Arg Arg Xaa  
210 215 220

Arg His Leu Val Tyr Val Leu Gly Xaa Gly Ala Asn Gly Ala Lys Xaa  
225 230 235 240

Ser Val Gly Leu Xaa Leu Asn Ala Ser Lys Ser Glu Ser Arg Pro Gly

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Lys